

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S1	164	73/152.19.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:06
S2	164	73/152.19.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/15 12:57
S3	29	S2 and sensor and (drill near4 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 17:06
S4	1	S3 and ((membrane or flexible or diaphragm) near4 wall)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:54
S5	12	S3 and (membrane or flexible or diaphragm)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/24 13:16
S6	9	S5 and gas	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/15 13:33
S7	15	("3595075").URPN.	USPAT	OR	ON	2006/05/17 12:20
S8	164	73/152.19.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/17 12:24

## EAST Search History

S9	29	S8 and sensor and (drill near4 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/18 21:18
S10	12	S9 and (membrane or flexible or diaphragm)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/19 00:20
S11	9	S10 and gas	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/17 12:40
S12	5	S11 and (chamber or reservoir or space)	USPAT	OR	ON	2006/05/19 00:16
S13	175	sensor near4 (chamber or reservoir or space) and (drill near4 string)	USPAT	OR	ON	2006/05/17 12:39
S14	81	S13 and (membrane or flexible or diaphragm)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/17 12:39
S15	70	S14 and gas	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/17 12:40
S16	7	("20050063444"   "5859430"   "6037592"   "6465775"   "6627873"   "6850013"   "6880402").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/17 15:08
S17	3	S16 and membrane and sensor and gas	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/17 15:31
S18	1	S17 and (downhole or wellbore or drill\$4)	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/17 15:31
S19	1	S17 and (downhole or wellbore or drill\$4 or (drill near4 string))	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/18 16:55
S20	7	("20050063444"   "5859430"   "6037592"   "6465775"   "6627873"   "6850013"   "6880402").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/18 16:55

## EAST Search History

S21	3	S20 and membrane and sensor and gas	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/18 16:55
S22	1	S21 and (downhole or wellbore or drill\$4 or (drill near4 string))	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/18 16:55
S23	1	S22 and gas	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/18 20:17
S24	7619	(gas or methane or (carbon adj dioxide) or nitrogen) and wellbore and drill\$6	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/18 20:18
S25	318	S24 and ((membrane or flexible or diaphragm) near4 wall)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/18 20:39
S26	286	S25 and sensor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/18 20:57
S27	115	S26 and (chamber or reservoir or space)	USPAT	OR	ON	2006/05/18 21:18
S28	35	S27 and (drill near4 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 23:10
S29	164	73/152.19.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/19 00:06
S30	7619	(gas or methane or (carbon adj dioxide) or nitrogen) and wellbore and drill\$6	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/19 00:06
S31	24	S30 and S29	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/19 00:06

## EAST Search History

S32	164	73/152.19.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/19 02:42
S33	7619	(gas or methane or (carbon adj dioxide) or nitrogen) and wellbore and drill\$6	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/19 02:44
S34	24	S33 and S32	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/19 00:18
S35	13	S34 and (chamber or reservoir or space)	USPAT	OR	ON	2006/05/19 00:19
S36	13	S34 and (chamber or reservoir or space)	USPAT	OR	ON	2006/05/19 00:19
S37	5	S36 and (membrane or flexible or diaphragm)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/19 02:21
S38	4	S37 and sensor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/19 02:22
S39	4	S38 and (membrane or flexible or diaphragm or barrier)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/19 01:22
S40	2	S38 and (membrane or diaphragm or barrier)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/19 02:44
S41	4	S36 and (membrane or diaphragm or barrier)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/19 02:38

## EAST Search History

S42	4	S41 and sensor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/19 02:22
S43	245	73/152.01.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:07
S44	110	73/152.23.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:07
S45	88	73/152.28.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:07
S46	29	S43 and (membrane or diaphragm or barrier)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/19 02:44
S47	23	S44 and (membrane or diaphragm or barrier)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/19 02:44
S48	12	S45 and (membrane or diaphragm or barrier)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/19 02:44
S49	3	(gas or methane or (carbon adj dioxide) or nitrogen) and wellbore and drill\$6 and S46	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/19 02:44
S50	4	(gas or methane or (carbon adj dioxide) or nitrogen) and wellbore and drill\$6 and S47	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/19 02:45

## EAST Search History

S51	2	(gas or methane or (carbon adj dioxide) or nitrogen) and wellbore and drill\$6 and S48	US-PGPUB; USPAT; USOCR	OR	ON	2006/05/19 02:47
S52	6	US-5469917-\$.DID. OR US-5351532-\$.DID. OR US-4887464-\$.DID.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/24 13:16
S53	3	S52 and (membrane or flexible or diaphragm or barrier)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/24 13:18
S54	2	S53 and sensor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/05/24 13:20
S55	2	S54 and (chamber or compartment or space or gap or channel)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 22:21
S56	164	73/152.19.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 22:14
S57	315	73/152.18.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 22:14
S58	246	73/152.01.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 22:14
S59	36	S56 and (membrane or flexible or diaphragm)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 22:20

## EAST Search History

S60	52	S57 and (membrane or flexible or diaphragm)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 22:20
S61	50	S58 and (membrane or flexible or diaphragm)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 22:20
S62	30	S59 and (chamber or compartment or space or gap or channel)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 22:40
S63	42	S60 and (chamber or compartment or space or gap or channel)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 23:11
S64	39	S61 and (chamber or compartment or space or gap or channel)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 22:21
S65	24	S62 and gas	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 22:41
S66	27	S63 and gas	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 22:52
S67	20	S64 and gas	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/11 01:02
S68	5	("3813935").URPN.	USPAT	OR	ON	2006/06/10 22:51

## EAST Search History

S69	7703	(gas or methane or (carbon adj dioxide) or nitrogen) and wellbore and drill\$6	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/11 01:03
S70	324	S69 and ((membrane or flexible or diaphragm) near4 wall)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 23:10
S71	291	S70 and sensor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 23:10
S72	119	S71 and (chamber or reservoir or space)	USPAT	OR	ON	2006/06/10 23:10
S73	39	S72 and (drill near4 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 23:11
S74	279	S71 and (chamber or compartment or space or gap or channel or reservoir)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/11 01:03
S75	99	S74 and (drill near4 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/10 23:12
S76	90	S75 and membrane	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/11 01:04



## EAST Search History

S77	28	("1865912"   "20020189339"   "3730269"   "4658897"   "4673037"   "4852069"   "5165438"   "5184678"   "5214251"   "5228508"   "5309997"   "5477101"   "5505262"   "5586602"   "5644076"   "5676213"   "5770798"   "5836389"   "5969241"   "6015010"   "6102152"   "6164126"   "6230799"   "6460618"   "6474349"   "6619394"   "6700338").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/10 23:41
S78	90	S76 and gas	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/11 01:04
S79	5	S68 and (chamber or compartment or space or gap or channel or reservoir)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/11 01:03
S80	2	(gas or methane or (carbon adj dioxide) or nitrogen) and wellbore and drill\$6 and S79	US-PGPUB; USPAT; USOCR	OR	ON	2006/06/11 01:04
S81	0	S80 and membrane	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/11 01:04
S82	5	S79 and gas	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/11 01:04
S83	0	S82 and membrane	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/06/11 01:04
S84	90	(gas or methane or (carbon adj dioxide) or nitrogen) and wellbore and drill\$6 and S78	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/21 23:22

## EAST Search History

S85	170	73/152.19.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/22 02:19
S86	8265	(gas or methane or (carbon adj dioxide) or nitrogen) and wellbore and drill\$6	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/21 23:22
S87	347	S86 and ((membrane or flexible or diaphragm) near4 wall)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/22 01:29
S88	312	S87 and sensor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/22 01:29
S89	300	S88 and (chamber or compartment or space or gap or channel or reservoir)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/22 01:29
S90	116	S89 and (drill near4 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/22 01:29
S91	104	S90 and membrane	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 23:22
S92	104	S91 and gas	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 23:22
S93	104	(gas or methane or (carbon adj dioxide) or nitrogen) and wellbore and drill\$6 and S92	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/22 01:40

## EAST Search History

S94	104	S93 and (formation near6 gas)	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/22 00:51
S95	1	S94 and (sensor near6 (chamber or compartment or space or gap or channel or reservoir))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/21 23:43
S96	1	S94 and (hydrophobic and oleophobic)	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/21 23:45
S97	2	US-5144831-\$.DID. OR US-5608167-\$.DID.	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/22 00:51
S98	1	S97 and ((membrane or flexible or diaphragm) near4 wall)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/22 01:29
S99	1	S98 and sensor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/22 01:29
S10 0	1	S99 and (chamber or compartment or space or gap or channel or reservoir)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/22 01:40
S10 1	0	S100 and (drill near4 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/22 01:29
S10 2	0	(gas or methane or (carbon adj dioxide) or nitrogen) and wellbore and drill\$6 and S100	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/22 01:40
S10 3	0	(gas or methane or (carbon adj dioxide) or nitrogen) and wellbore and S100	US-PGPUB; USPAT; USOCR	OR	ON	2006/11/22 01:40

## EAST Search History

S10 4	170	73/152.19.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/22 02:20
S10 5	252	73/152.01.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/22 02:19
S10 6	322	73/152.18.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/11/22 02:20
S10 7	170	73/152.19.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:06
S10 8	254	73/152.01.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:07
S10 9	115	73/152.23.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:07
S11 0	94	73/152.28.ccls.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:49
S11 1	11	S107 and (sensor near6 chamber)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 17:47

## EAST Search History

S11 2	5	S108 and (sensor near6 chamber)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:54
S11 3	9	S109 and (sensor near6 chamber)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:54
S11 4	4	S110 and (sensor near6 chamber)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:54
S11 5	1	S111 and ((membrane or flexible or diaphragm) near4 wall)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:56
S11 6	0	S112 and ((membrane or flexible or diaphragm) near4 wall)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 19:46
S11 7	0	S113 and ((membrane or flexible or diaphragm) near4 wall)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:54
S11 8	0	S114 and ((membrane or flexible or diaphragm) near4 wall)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:54
S11 9	1514	(sensor near6 chamber) and ((membrane or flexible or diaphragm) near4 wall)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 16:56

## EAST Search History

S12 0	4413	sensor and (drill near4 string)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 17:06
S12 1	8	S119 and S120	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 17:16
S12 2	3	S121 and (volume near6 gas)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 17:18
S12 3	2	S122 and (formation near6 gas)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 17:18
S12 4	2629	(volume near6 gas) and (sensor near6 chamber)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 17:47
S12 5	21	S120 and S124	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 17:48
S12 6	3	S125 and ((membrane or flexible or diaphragm) near4 wall)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2006/12/05 19:54